

IN THE CLAIMS:

Claims 1-27 have been amended herein. All of the pending claims 1 through 27 are presented below. This listing of claims will replace all prior versions and listings in the application. Please enter these claims as amended.

1. (Currently Amended) A method of fabricating a substantially hermetic package, comprising:

placing at least one semiconductor device with a surface thereof in a horizontal plane; and stereolithographically fabricating a substantially hermetic package on saidthe surface of saidthe at least one semiconductor device, saidthe substantially hermetic package comprising at least one layer of at least partially consolidated hermetic packaging material.

2. (Currently Amended) The method of claim 1, further comprising: recognizing a location and orientation of saidthe surface of saidthe at least one semiconductor device.

3. (Currently Amended) The method of claim 2, further comprising storing data including at least one physical parameter of saidthe at least one semiconductor device and of saidthe substantially hermetic package in computer memory, and using the stored data in conjunction with a machine vision system to facilitate said-recognizing the location and orientation.

4. (Currently Amended) The method of claim 3, further comprising using the stored data, in conjunction with saidthe machine vision system, to effect said-stereolithographically fabricating the substantially hermetic package.

5. (Currently Amended) The method of claim 1, further including securing said~~the~~ at least one semiconductor device to a carrier prior to placing ~~the surface of~~ the at least one semiconductor device with the surface in said~~the~~ horizontal plane.

6. (Currently Amended) The method of claim 1, further comprising:
flipping said~~the~~ at least one semiconductor device; and
stereolithographically fabricating at least one additional layer of said~~the~~ substantially hermetic package on another surface of said~~the~~ at least one semiconductor device.

7. (Currently Amended) The method of claim 6, wherein said-stereolithographically fabricating said~~the~~ at least one additional layer comprises securing said~~the~~ at least one additional layer to a previously formed layer of said~~the~~ substantially hermetic package.

8. (Currently Amended) The method of claim 7, wherein said-securing said~~the~~ at least one additional layer to said~~the~~ previously formed layer of said~~the~~ substantially hermetic package comprises substantially encapsulating said~~the~~ at least one semiconductor device.

9. (Currently Amended) The method of claim 1, wherein said-stereolithographically fabricating comprises:
forming a layer of unconsolidated hermetic packaging material;
at least partially selectively consolidating said~~the~~ hermetic packaging material of said~~the~~ layer in selected regions; and
repeating said-forming said~~the~~ layer and said-at least partially selectively consolidating until all surfaces of the at least one semiconductor device are substantially covered with at least partially consolidated hermetic packaging material.

10. (Currently Amended) The method of claim 1, wherein ~~said~~-stereolithographically fabricating comprises:

providing a sheet of hermetic packaging material; and

defining at least boundaries of a corresponding, first layer of the substantially hermetic package in ~~said~~the sheet.

11. (Currently Amended) The method of claim 10, wherein ~~said~~ stereolithographically fabricating further comprises:

providing at least one additional sheet of hermetic packaging material; and

defining at least boundaries of an additional, corresponding layer of the substantially hermetic package in ~~said~~the at least one additional sheet.

12. (Currently Amended) The method of claim 10, wherein ~~said~~-defining comprises ~~defining~~ ^{laser-cutting}.

13. (Currently Amended) The method of claim 10, wherein ~~said~~-providing ~~said~~the sheet comprises providing a sheet of thermoplastic glass.

14. (Currently Amended) The method of claim 1, wherein ~~said~~-stereolithographically fabricating is effected until ~~said~~the at least one semiconductor device is substantially encapsulated by hermetic packaging material.

15. (Currently Amended) The method of claim 1, wherein ~~said~~-placing comprises placing an assembly including at least one semiconductor die and at least one carrier substrate in ~~said~~the horizontal plane.

16. (Currently Amended) The method of claim 1, wherein ~~said~~-placing comprises placing an assembly including at least one semiconductor die and at least one lead frame in ~~said~~the horizontal plane.

17. (Currently Amended) The method of claim 1, wherein ~~said~~-placing comprises placing at least one substantially bare semiconductor die in ~~said~~the horizontal plane.

18. (Currently Amended) The method of claim 17, wherein ~~said~~-placing ~~said~~the at least one substantially bare semiconductor die comprises placing a semiconductor substrate bearing a plurality of substantially bare semiconductor-~~dice~~die locations in ~~said~~the horizontal plane.

19. (Currently Amended) The method of claim 18, wherein ~~said~~ stereolithographically fabricating is effected on a first side of ~~said~~the semiconductor substrate, ~~said~~the hermetic packaging material substantially covering ~~said~~the first side of ~~said~~the semiconductor substrate.

20. (Currently Amended) The method of claim 19, further comprising inverting ~~said~~the semiconductor substrate and removing material of ~~said~~the semiconductor substrate between adjacent semiconductor-~~dice~~die locations at least down to ~~said~~the hermetic packaging material, ~~said~~the hermetic packaging material maintaining positions of ~~said~~-adjacent semiconductor dice.

21. (Currently Amended) The method of claim 20, wherein ~~said~~-removing comprises sawing ~~said~~the semiconductor substrate along streets located between ~~said~~the adjacent semiconductor-~~dice~~die locations.

22. (Currently Amended) The method of claim 20, wherein ~~said~~-removing comprises etching ~~said~~the semiconductor substrate along streets located between ~~said~~the adjacent semiconductor ~~dice~~die locations.

23. (Currently Amended) The method of claim 20, further comprising: disposing at least partially consolidated hermetic packaging material between ~~said~~the adjacent semiconductor dice and on an active surface of each of ~~said~~the adjacent semiconductor dice to form a plurality of substantially hermetically packaged semiconductor dice.

24. (Currently Amended) The method of claim 23, further comprising: singulating at least some of ~~said~~the plurality of substantially hermetically packaged semiconductor dice from ~~said~~the semiconductor substrate.

25. (Currently Amended) The method of claim 23, further comprising: exposing at least one bond pad on an active surface of at least one of ~~said~~the plurality of substantially hermetically packaged semiconductor dice.

26. (Currently Amended) The method of claim 25, wherein ~~said~~-exposing comprises etching a region of an at least partially consolidated hermetic packaging material located above ~~said~~the at least one bond pad.

27. (Currently Amended) The method of claim 25, further comprising: fabricating at least one conductive trace on ~~said~~the substantially hermetic package and in communication with ~~said~~the at least one bond pad.